



**Department of Agriculture  
State of Hawaii**

# **AN AGRICULTURAL MARKET INFORMATION SYSTEM FOR SMALL FARM DECISION-MAKING IN HAWAII**

Final Report to

The Federal-State Marketing Improvement Program (FSMIP)  
United States Department of Agriculture  
Agricultural Marketing Service  
Transportation and Marketing Division

by

State of Hawaii  
Department of Agriculture  
Agricultural Development Division  
Market News Section

March 31, 2005

## **Executive Summary**

From its onset, this project was designed to utilize federal resources in delivering an “Agricultural Information System” that can be used as a comprehensive source of information to assist small farmers and entrepreneurs in Hawaii to make informed business decisions and minimize business risks. In this multi-faceted information system, the Hawaii Department of Agriculture (HDOA) will maintain the website and upgrade the various webpages into the foreseeable future.

This information system will support market research and planning, and also support economic and policy analyses. The system includes information on current and historical production, market supply, wholesale prices, trade, market potentials, consumer preferences, and other quantitative data as follows:

- To collect and develop a comprehensive baseline information system (production, market supply, wholesale prices, key markets, etc.) on Hawaii’s major crops;
- To produce market “Outlook Reports” that will include trend analyses and market forecasts for potential market creation or expansion;
- To compile information that will be used for preparing strategic marketing plans and feasibility studies like that of a farmers’ market in Hawaii;
- To compile relevant quantitative and qualitative data into an electronic database system that can be accessed readily by data users; and
- To disseminate this information to businesses and policy analysts for use in decision-making.

All the above objectives were completed in four well-defined phases of the project. Sufficient federal and state funds were available to see the entire project through completion. A redeveloped website for the Department’s Agricultural Development Division (ADD) now hosts all the features of this informational system. It utilizes flash technology to maximize picture images and provides tools to comply with the American with Disabilities (ADA) Act. It includes many website tools and useful links to assist small farmers and agribusinesses in Hawaii to utilize relevant information in an efficient and effective manner.

## **I. Introduction**

When Hawaii's economy was struggling for most of the 1990s and early 2000s, diversified agriculture remained a bright spot in the State's economy. It has been one of the exceptional sectors of Hawaii's economy, exhibiting consistent and sustainable growth in the recent past. Between 1993 and 2003, diversified agriculture grew at an annual compounded rate of 3.6 percent per year. Despite the closure of all but two sugar plantations in Hawaii, diversified agriculture was able to expand rapidly enough to replace farm-gate revenue lost through sugarcane. In 2003, the farm-gate value of agriculture was at its highest level since 1990. Diversified agriculture is defined as crops and livestock other than sugar and pineapple, and is produced mainly by small farms. According to the 2002 Census of Agriculture, 64 percent of farms in Hawaii are less than 10 acres in size compared to only 8.2 percent for all of the United States. The median size of a farm in Hawaii is only 5 acres.

Despite this commendable growth, Hawaii continues to face enormous challenges in the marketplace. This requires strengthening our ability to compete in an increasingly global, information-driven economy by improving our farmers' and agricultural entrepreneurs' ability to understand economic and market dynamics in local, U.S. domestic and international markets. As such, this project serves to develop an agricultural market information system that will help agricultural industry members like farmers, packers, exporters, wholesalers, retailers and the like to make informed business decisions and minimize business risks. Additionally, this information system will also help government analysts and policy makers develop sound agricultural policies in the state.

This project also serves to support our efforts for sustained diversified agricultural development in the next five years. The Hawaii Department of Agriculture (HDOA) targets a total production value of about \$436 million for diversified agriculture during this period. This amount represents a 61 percent increase in farm-gate value from the 1993 level. The challenges for diversified agriculture in Hawaii continue in the face of rapid urbanization, skyrocketing property prices, rising fuel costs, rising labor costs, an influx of alien pest species, increasing competition from free trade agreements and continuing trade barriers in some export markets.

From the onset of this project, the targeted production value of diversified agriculture is based on the following key assumptions:

- Globalization of the marketplace will continue at a faster pace, and market, economic and business information will continue to be critical in order to remain competitive in an information technology-driven global economy;
- As the world's economic structure changes, so does Hawaii's economy. This will require continuous adjustments in business and government operations in order to meet the challenges of the 21<sup>st</sup> century. These global changes will directly affect the way agribusiness and the food processing business operate;
- Government will continue to face dwindling resources, in terms of staff and funding, and increased productivity and efficiency will be the order of the day; and
- Customer satisfaction, whether they are private or public clients, is a top priority consideration.

Based on these assumptions, one of the Department's goals is to develop an "Agricultural Information System" that can be used as a comprehensive source of information for market research, planning, economic analysis and policy analysis. Such a system will include information on current and historical production, current and historical wholesale price of commodities, outlook reports, market supply and other quantitative data.

## **II. Importance of Information**

The role of government in providing information has been well documented. Essentially, in a competitive market economy, information is an important factor in minimizing business risks. The more the farmer or the entrepreneur knows, the more he or she is able to make informed decisions regarding his or her business operations.

In economics literature, an almost universal agreement is that agriculture is risky. Antle and Hatchett (1986), for example, characterized risks in agriculture in terms of the dynamics involved in production decisions. The quality of these decisions, and hence the efficiency of agricultural markets, depends upon information the available to farmers.

Based on economic efficiency as a central goal, the role of government therefore cannot be denied. However, public intervention in agricultural marketing has seen its decline in activities, as well as funding. Among these public interventions are information activities. Caswell (1997), for example, on a recent review of marketing programs suggests that among all programs, information activity stands out. Other studies that have pointed out the importance of government providing information include those of Hayami and Peterson (1972), who developed a model to evaluate social returns to improvement in agricultural information and showed how the benefits well outweighed the costs; Knutson, et al. (1983) who justified government's role in providing agricultural information in the sense that freely available information makes markets more competitive and more efficient; Thompson and Sonka (1997) who concluded that government can be the primary collector of information that is often difficult for the public to access directly, and that it has a role in information dissemination; and Riemenschneider (1979), who examined the implications of the fact that information possesses many attributes of a public good, and built a strong case for public information.

Overall, government can facilitate industry growth by developing and providing relevant and useful information that businesses can use to minimize risks and improve profitability.

### **III. Mission and Objectives**

The general mission of this project is to develop an "Agricultural Information System" that can be used as a comprehensive source of information for market research and planning, and simultaneously to support economic and policy analyses. Such a system shall include information on current and historical production, market supply, wholesale prices, trade, market potentials, consumer preferences, and other quantitative data.

In more specific terms, the objectives are as follow:

- To collect and develop a comprehensive baseline information system (production, market supply, wholesale prices, key markets, etc.) on Hawaii's major crops to assist Hawaii's small farmers and entrepreneurs to make better informed business decisions;
- To produce market "Outlook Reports" that will include trend analyses and market forecasts for potential market creation or expansion;
- To compile information that will be used for preparing strategic marketing plans and feasibility studies like that of a farmers' market in Hawaii;
- To compile relevant quantitative and qualitative data into an electronic database system that can be accessed readily by data users; and
- To disseminate this information to businesses and policy analysts for use in decision-making.

#### **IV. Results and Findings**

The project consisted of four phases (I to IV) as follows:

- Phase I: Baseline data collection, analyses and validation;
- Phase II: Database design and management for fresh fruits and vegetables;
- Phase III: Production of outlook and related market reports; and
- Phase IV: Industry outreach and information dissemination.

In Phase I, under baseline data collection, analyses and validation, specific tasks include the following:

- Identifying available secondary information about the products to be included in the study, including literature review and sources of data;
- Identifying areas of missing secondary information;
- Collecting primary data, as needed (e.g., industry surveys); and
- Establishing baseline information on production, markets, trade flow, competition, market potential and consumer characteristics for the top products or product-

groups. Examples of these commodities are: coffee, flowers, and select tropical fruits such as papayas.

Staff spent a lot of time searching for the appropriate information and the related data sources to support various requirements of this project. An additional requirement here was the development of a website page and application that provides location and select information on farmers' markets throughout the State. Farmers' markets provide an excellent opportunity for many smaller farmers to sell their products directly to their customers. We now have a directory on farmers' market on Oahu and additional information on other markets located on the neighboring islands of Hawaii, Maui and Kauai. The webpage, which displays information such as location, phone number and available days and time, can be viewed at the following webpage address (URL):

<http://www.hawaiiag.org/ADD/markets/welcometomarkets.html>

Parts of this webpage are presented in Appendix I of this report. The home-page and text version of the webpage, as well as two markets, one in Kahului, Maui and one at the Kapiolani Community College in Honolulu are also displayed.

In Phase II, under database design and management, the focus here was to implement the collection, processing and delivery of market and price information in an orderly, efficient and effective manner. Naturally, the logical path was to organize the information electronically. Specific tasks in this phase included the following:

- Identify resources needed for an electronic database and determine the most efficient way to organize the data electronically;
- Start assembling the data and organizing them in an orderly and useable fashion;
- Create computer database for various information, including wholesale prices, supply and other production statistics. Enhance existing webpages to serve as medium for information dissemination; and
- Perform basic data analysis and presentation (graphs, charts, searchable databases).

Under this phase, the development team worked on a database, which holds information on fresh produce imported by air and ship/barge from the mainland as well as the neighbor islands. Some information from farmers on Oahu who sell to the established wholesalers is also collected. All of the information that Market News Section collects is then used to produce various reports. These reports would include the Weekly Honolulu Arrivals of Fruits and Vegetables and the Bulk of Barge Arrivals. There are other reports that the section produces but these are not based on volume of inshipment. The specific database segments completed include the following:

- Completed development and operationalize a supply database for fresh fruits and vegetables in Honolulu;
- Completed development of a price database for wholesale prices for fresh fruits and vegetables in Honolulu;
- Completed development of a barge arrivals database for fresh fruits and commodities;
- Completed development and operationalize a query database, webpage application that provides wholesale price trend over time for 25 select fresh fruits and vegetables in Honolulu. Please view the query database webpage at [www.hawaiiag.org/news/ffv/](http://www.hawaiiag.org/news/ffv/);
- Completed a query database, website application for barge arrival to Honolulu from intrastate origin. Based on feedback from various farmers using our webpage, we have retained modifications developed to enhance user access and user friendliness. Please view the query database webpage at <http://www2.hawaiiag.org/hdoa/add/man/reports/breportchart.asp>

It is worthwhile noting the database queries includes a search engine with drop-down window for “month of year” and another drop-down, calendar window for “day of month.” These new features allow the user to “click and choose” options with the mouse and eliminate any typing as required (see Appendix II).

Additionally, we have retained the prototype tabular search engine option for the wholesale price database (see Appendix II). This option allows users to download data in various formats from our website to their personal computers in real time. Users of

our data no longer have to request data pulls from Market News Section (MNS) staff members. Instead, they can perform the task anytime, anywhere and at a faster rate and simultaneously freeing up MNS staff time. The default data export option is in MS-Excel format but text format is also available.

Beyond that, Phase II has provided us an almost seamless electronic system, where data is inputted directly by data collection personnel into a portable, personal digital assistant (PDA) and then translated into the various databases. The information is reviewed and then reports are generated in defined formats. The reports are then faxed out from the desktop computer to clients listed on various directories. This system minimizes data input errors and free up staff to conduct other tasks.

In Phase III, the primary focus is on production of research and outlook reports. The primary tasks in this phase are as follows:

- Based on the information compiled in the above steps, produce “Outlook Reports” for select commodities. Outlook reports will include trend analyses and forecasts;
- Compile market information and potential areas for expansion for each product; and
- Determine the feasibility of various marketing and economic development initiatives; One example is a study to assess the feasibility of establishing a world-class Hawaii farmers’ market as an economic strategy to showcase the state’s high quality agricultural products.

An important element in this phase is the analysis of production and trade data on select commodities, and analysis of market potential and current consumption trends. MNS will continue to work with various consultants on research and outlook reports in the future. The reports will cover papayas, coffee, orchids and economic impact of an irrigation system on Oahu. To achieve a certain degree of consistency, all the reports will conform to a specific format as indicated in our previous report (see Appendix III).

Equally important, the MNS economist is now able to access real time trade information to extract relevant statistics via Global Trade Information. This service was discovered during Phase I of the project and has proven to be an important tool in monitoring

agricultural trade between Hawaii and its various international markets, particularly Japan.

In Phase IV, the primary emphasis is on industry outreach and information dissemination. The primary tasks in this final phase are as follows:

- Collaborate with the industry in coming up with their marketing plans based on the information system and “Outlook Reports.” This has a direct implication for industry groups who apply for promotional funds from the Department;
- Conduct informational meetings with the industry to disseminate the information (this includes the export readiness seminars);
- Enhance existing website for electronic retrieval of the information.

While substantial effort was devoted to planning for industry outreach, various logistics challenges did not permit the planned one-day workshops. The export readiness seminars, conducted jointly with WUSATA staff members will take place, May 16-20, 2005. We are also scheduling public hearings in late May for our proposed Hawaii Seal of Quality Program and outreach is also planned during that time.

Additionally, we plan to submit an article on the information system to be published in ***Agriculture Hawaii***, later this year. The publication is widely read amongst agricultural producers, researchers and decision-makers in Hawaii. It is our hope that farmers in Hawaii, particularly those with small farms, will have far greater access to current market information, which can then assist them to make better informed decisions in their farming activities.

The milestone in this Phase IV is the redevelopment of the website that hosts the different product components (webpages), which were developed in the different phases above (see Appendix IV) and more. This is also the primary website for the Agricultural Development Division and the site address is as follows:

[www.hawaiiag.org/ADD/index.html](http://www.hawaiiag.org/ADD/index.html)

This host website uses three themes to reflect Hawaii's diversified agriculture - *Family Operated Farms*, *Unique Inland Products*, and *Hawaii is an ideal location for Agriculture*. It utilizes flash technology to maximize picture images and provides tools to comply with the American with Disabilities (ADA) Act. Among useful features listed here are the search option for the entire ADD website and Statistics webpage, which is linked to the Hawaii Agricultural Statistics (see Appendix IV). The Research and Outlook webpage contains various studies undertaken during the project period. The Useful Links webpage also allows users quick access to common agricultural websites in Hawaii and the United States.

## **V. Other Webpages**

Other webpages in the redeveloped ADD website includes the Recipes for Hawaii, Calendar of Events, Risk Management and Products Directory. The Recipes for Hawaii webpage also includes an island fresh product availability chart. The Product Directory is currently under development and will provide an efficient market support/products information page.

In addition to the above phases, we developed another website entitled "Getting to Know Hawaii Produce." This website contains videos of 8 different tropical favorites (apple bananas, longan, pineapple, rambutan, starfruit, sweet potato and watermelon) and is hosted by our Hawaii celebrity chef, Roy Yamaguchi (see Appendix V). This effort is an attempt by the Department to utilize culinary chefs and video technology to market our products. The website address is as follows:

<http://www.hawaiiag.org/add/recipes/index.html#videos>

We have also produced a collection of high quality products that are grown here in Hawaii for use by Department staff for marketing, promotion and outreach purposes.

Finally, with the assistance of Ag Day TV, we were able to produce seven segments of videos, which reflect various aspects diversified agriculture in Hawaii. The seven segments were broadcasted twice in 2004 on national television in many farm states.

The website address is as follows:

<http://www.hawaiiag.org/add/agday/index.html>

Finally, we are beefing up our products directory, which is essentially a database query system for farm and agribusinesses producing fresh and processed agricultural products in Hawaii (see Appendix VI).

## **VI. Conclusion**

While this report may depict the proposal as a routine project, the actual implementation has been a learning curve with many challenges to overcome. The supply and price database, in particular, took endless staff effort and many hours of data input, debugging and testing. The project's completion was very satisfying and now adds much more efficiency, timeliness, and accuracy to our market news reporting system. It was a worthwhile effort. The outlook, feasibility and research reports also took a lot of time, particularly in searching for the appropriate professional and contracting. Finally, the website took many trial runs before we felt comfortable with the information format and design presentation.

As was established in the project proposal, we have accomplished the following product deliverables as follow:

- Electronic databases for market supply, wholesale prices, and barge arrivals for fresh fruits and vegetables;
- Outlook, economic and research reports for individual products;
- Feasibility study for a farmers' market;
- Export seminar curriculum (with WUSATA);
- Public seminars on the results of the studies published; and
- Internet webpages on the information system developed.

Additionally, we were able to incorporate other features and information such as the Farmers Market webpage to help promote sales of agricultural products in local markets across the state. We also included Island fresh recipes, Island fresh product availability

chart and other production and marketing related programs such as crop insurance and seal of quality.

We have learned that the website is most useful when there is a constant stream of new information posted for viewers. While the databases are refreshed on a weekly basis, there is a persistent need to keep market outlook and research reports a priority and to keep the flow of quality information despite limited resources available. We are most fortunate to have the assistance of this USDA-FSMIP grant and the gracious assistance extended by Janice Zygmunt, FSMIP staff officer in seeing this project through from start to finish. We would also like to extend our thanks to our project consultants and staff members who participated in this information system project.

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## APPENDIX I

## Hawaii Farmers' Market Webpage


**DEPARTMENT OF AGRICULTURE**      **Agricultural Development Division**

SEARCH for  Enter Search

[Home](#)  
[About Us](#)  
[HDOA Gateway](#)  
[Financial](#)  
[Recipes for Hawaii](#)  
[Market Reports](#)  
[Risk Management](#)  
[Statistics](#)  
[Farmers Market](#)  
[Calendar of Events](#)  
[Research & Outlook Reports](#)  
[Seal of Quality Program](#)  
[Links](#)  
[Products Directory](#)  
[Ag Day TV](#)  
[Contact](#)  
[Site Map](#)

## HAWAII'S FARMERS MARKETS

Click [HERE](#) for the text version

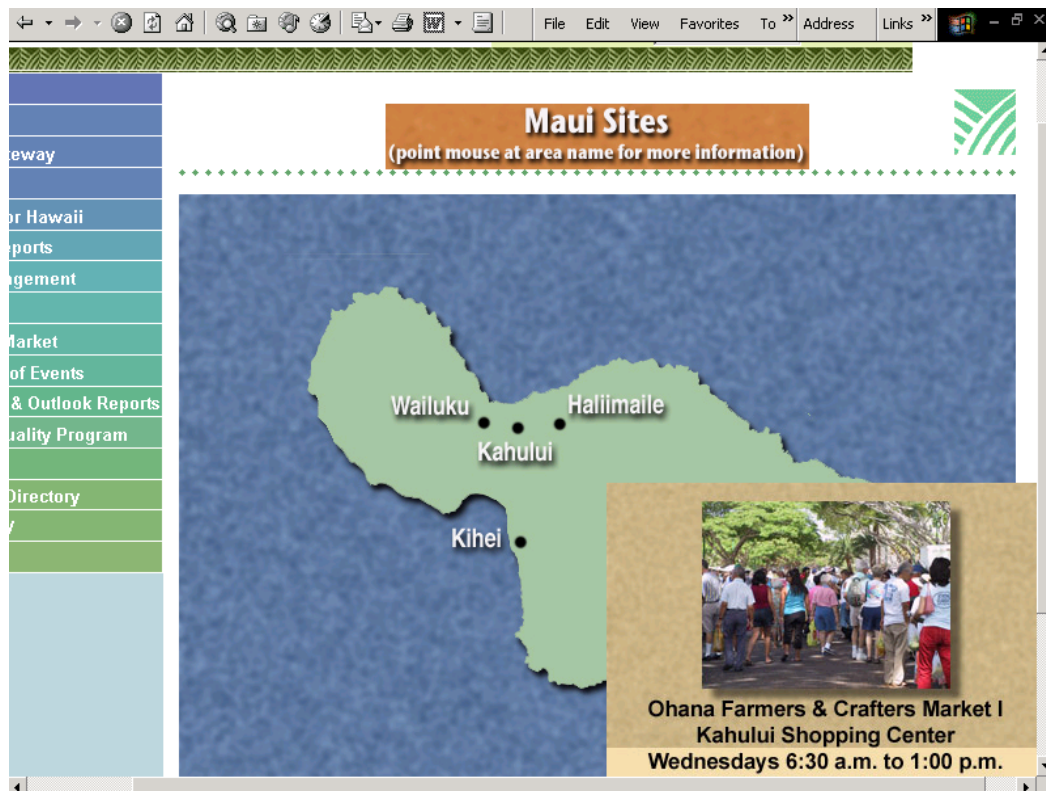
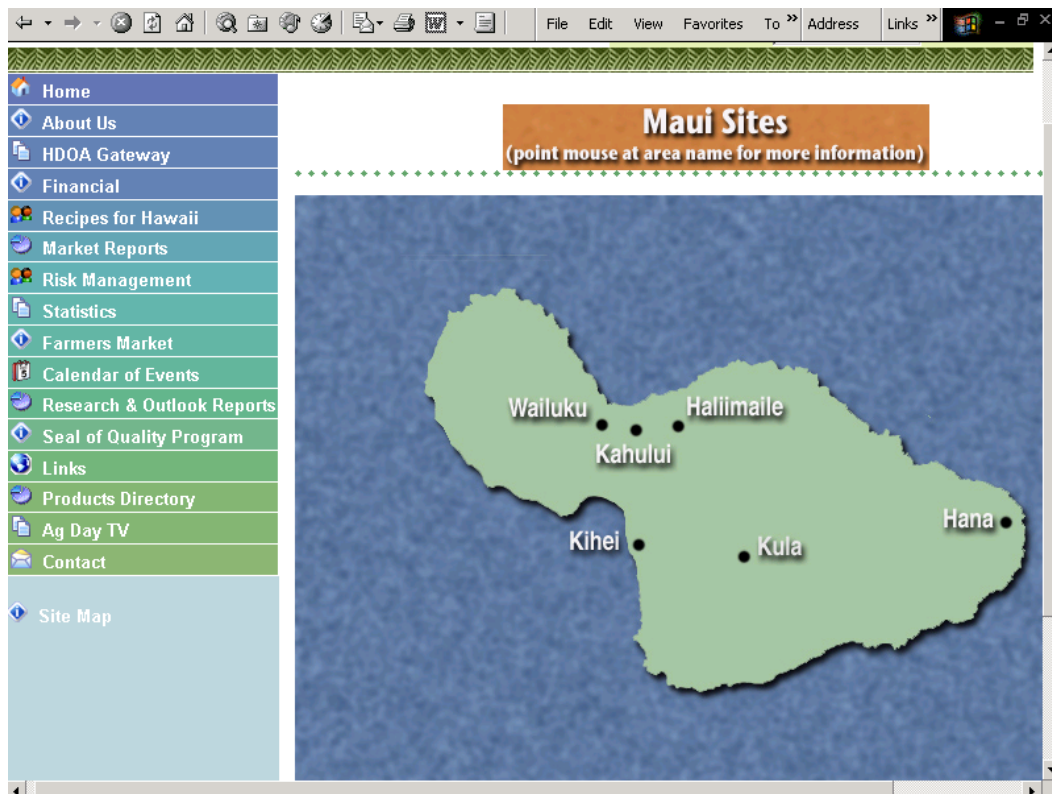


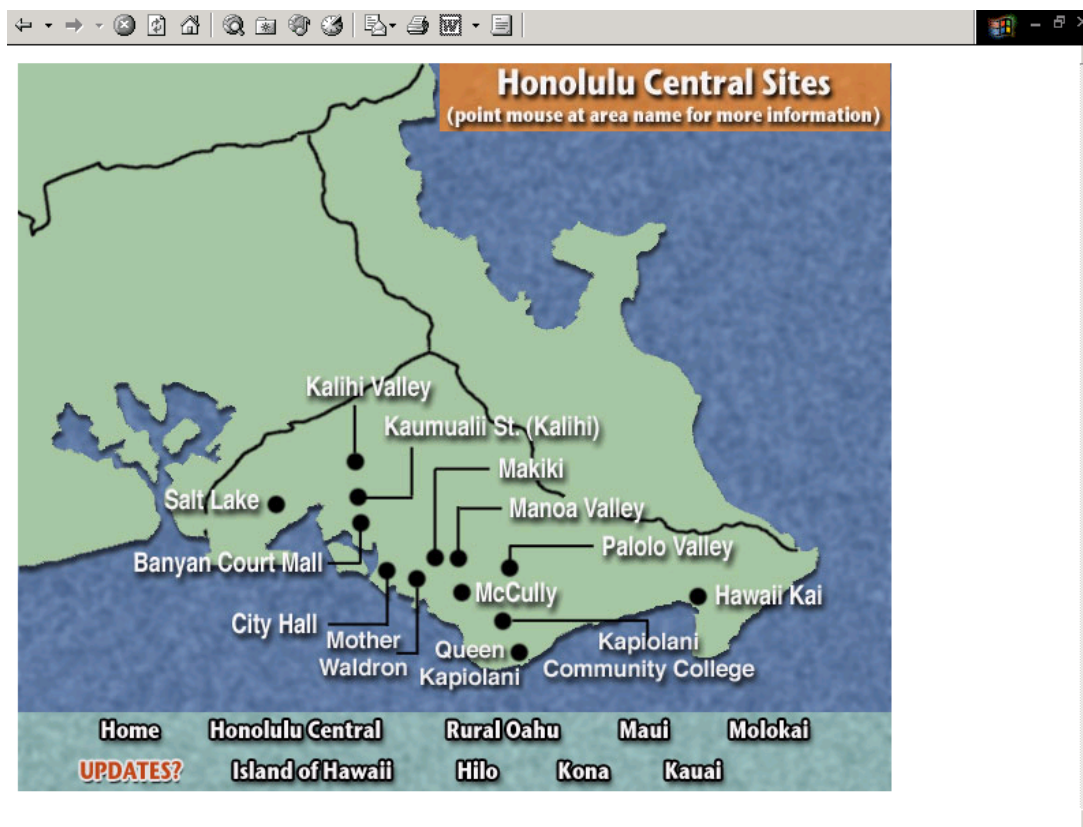
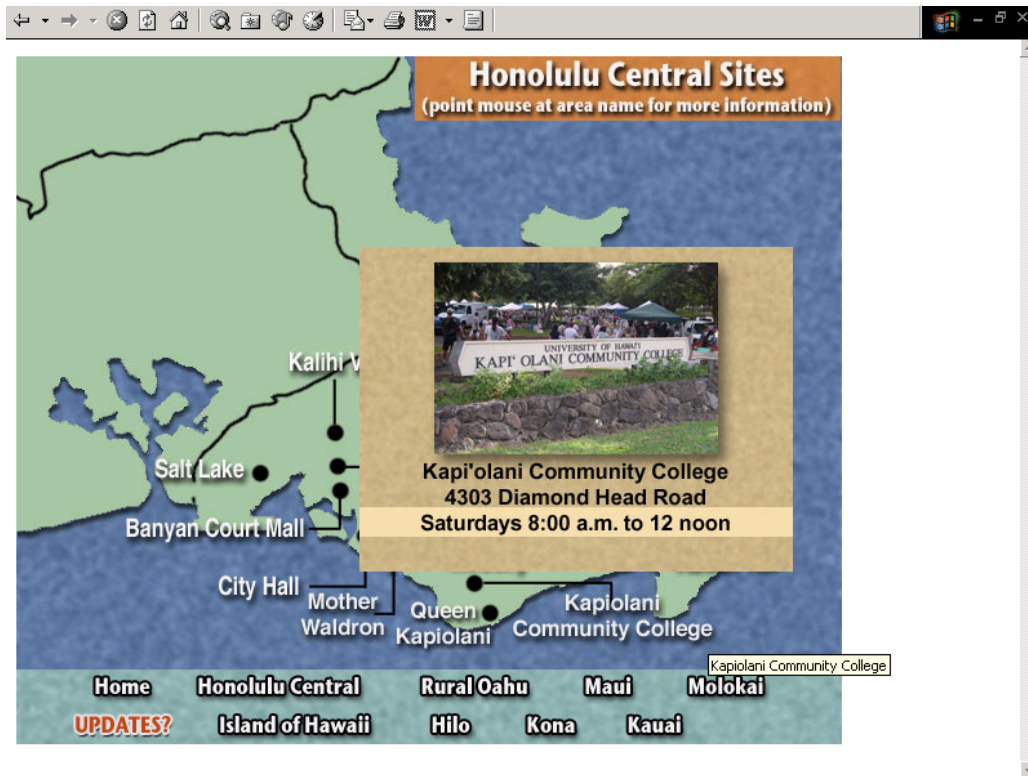
Click on the sites below for a location nearest you.

**Farmer's Markets in Hawaii**

<a href="#">Hawaii</a>	<a href="#">Kauai</a>	<a href="#">Maui</a>
<p><b>Akebono Farmers Market</b>            At the rear of Luquin's Mexican Restaurant            Sundays 9:00 am to 1:00 pm            Phone: 808-965-9205 (Kimo)</p> <p><b>Ali'i Garden Market Place</b>            Ali'i Drive            Daily (except Monday and Tuesday)            9:00 am to 5:00 pm</p> <p><b>Caretakers of Our Land Farmers Market</b>            Sacred Heart Church            Saturdays 7:30 am to 12 Noon</p> <p><b>Downtown Honoka'a Farmers Market</b>            Honoka'a            Saturdays 8:00 am</p> <p><b>Fern Forest Town Market</b>            Big Island by Mt. View            2nd Saturday 9:00 am to 1:00 pm</p> <p><b>Hawaiian Homestead Market</b>            64-759 Kahilu Road, Kuhio Hale Building            Saturdays 7:00 am to 12 Noon            Phone: 808-967-7209</p> <p><b>Hilo Farmers Market</b>            Kamehameha Avenue and Mamo Street            Wednesday and Saturday 7:00 am to 3:00            Phone: 808-933-1000</p>	<p><b>Hanalei Saturday Market</b>            Hanalei            Saturdays 9:00 am</p> <p><b>Hanapepe Park</b>            Hanapepe            Thursdays 3:00 pm</p> <p><b>Hawaiian Farmers of Hanalei</b>            Waipa            Tuesdays 2:00 pm</p> <p><b>Kalaheo Neighborhood Center</b>            Papalina Road off Kaunualii            Tuesdays 3:30 pm</p> <p><b>Kapaa New Town Park</b>            Kapaa            Wednesdays 3:00 pm</p> <p><b>Kekaha Neighborhood Center</b>            Elepaio Road            Saturdays 9:00 am</p> <p><b>Kilauea Neighborhood Center</b>            One Keneke Road            Thursdays 4:30 pm</p> <p><b>Kilauea Lighthouse Road</b>            Lighthouse Road            Saturdays 11:00 am</p>	<p><b>Farmers Market of Maui</b>            Suda Store parking lot            Monday, Wednesday, Friday            1:30 pm to 5:30 pm</p> <p><b>Farmers Market of Maui</b>            Hawaiian Motors parking lot            Monday, Wednesday, Friday            1:30 pm to 5:30 pm</p> <p><b>Hana Farmers and Crafts Market</b>            Lower Nahiku Road            Thursdays 10:00 am to 1:00 pm</p> <p><b>Kula, Maui</b>            On the side of Morioka Road            Every Sunday 7:00 am to 1:00 pm            Phone: 808-878-2500</p> <p><b>Ohana Farmers and Crafts Market</b>            Kahului Shopping Center            Wednesdays 6:30 am to 1:00 pm</p> <p><b>Ohana Farmers and Crafts Market</b>            Kaahumanu Shopping Center            Fridays 9:00 am to 5:00 pm</p> <p><b>Upcountry Maui</b>            80 Halimale Road            Saturdays 10:00 am to 1:00 pm</p>

[Molokai](#)





## APPENDIX II

### Webpages and Search Engine



**HAWAII DEPARTMENT OF AGRICULTURE** Agricultural Development Division

SEARCH for  Enter Search

**HAWAII AGRICULTURAL MARKET NEWS REPORTS**

The links below take you to a calendar of current and historical Hawaii Market News Reports for the month indicated. These reports can only be viewed with Adobe Acrobat. To download a free copy of this utility go to Adobe's [web site](#).

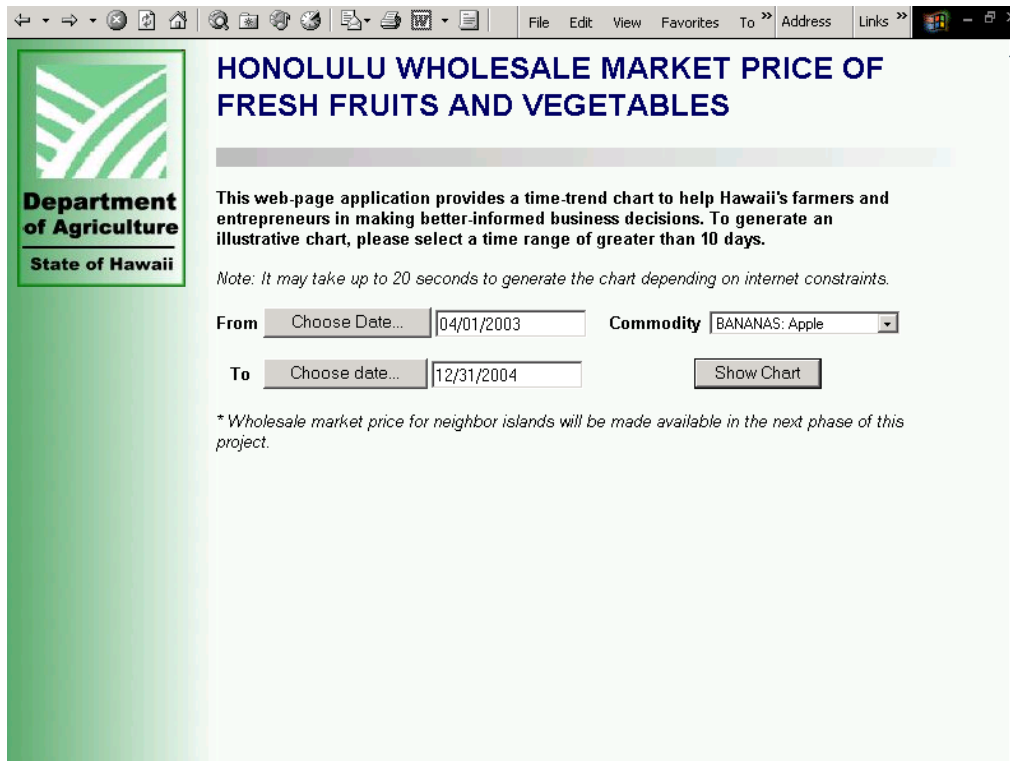
[Honolulu Wholesale Market Price Chart](#)  
[Island Fresh Produce](#) - brochure of locally grown produce in pdf format.

**2005 Market News Reports**

- [April Market News Reports](#)
- [March Market News Reports](#)
- [February Market News Reports](#)
- [January Market News Reports](#)

[Previous Market News Reports](#)

For more information about this page and the Market News Reports, please email [Robyn Vierra](#)



**HONOLULU WHOLESALE MARKET PRICE OF FRESH FRUITS AND VEGETABLES**

**Department of Agriculture**  
State of Hawaii

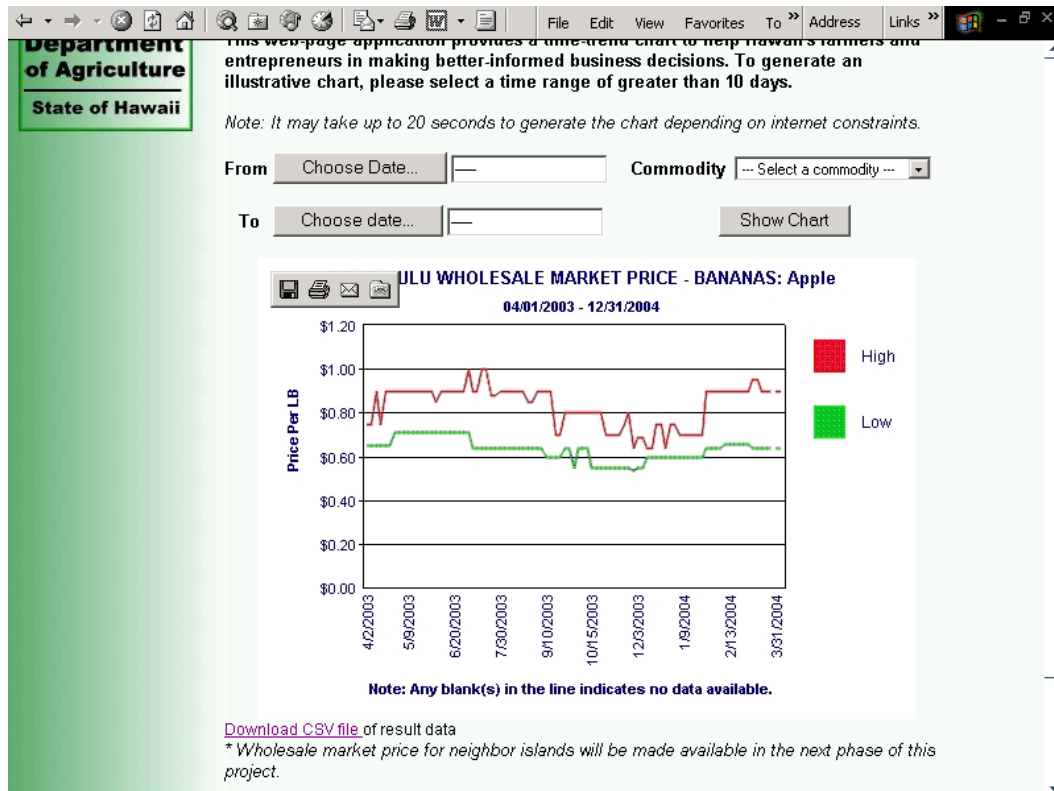
This web-page application provides a time-trend chart to help Hawaii's farmers and entrepreneurs in making better-informed business decisions. To generate an illustrative chart, please select a time range of greater than 10 days.

*Note: It may take up to 20 seconds to generate the chart depending on internet constraints.*

From  Choose Date...  04/01/2003 **Commodity**  BANANAS: Apple

To  Choose date...  12/31/2004

*\* Wholesale market price for neighbor islands will be made available in the next phase of this project.*



**Department of Agriculture**  
**State of Hawaii**

**HONOLULU WHOLESALE MARKET PRICE OF FRESH FRUITS AND VEGETABLES**

**Database Results CSV Download**  
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**Expert form**

You have select Commodity: **BANANAS:Apple**  
The Start date is : **04/01/2003** and End date is: **12/31/2004**

Column Delimiter

Text qualifier

☐ No field names

Click to download it as .CSV

If you configure your browser to associate the file type text/comma-separated-values with your spreadsheet software, then it will be started automatically when you download the file.

[Report Generator](#)

Microsoft Excel - 2665674\_export[1]

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	A	B	C	D	E	F	G	H	I	J	K	L
	HI PRICE	LO PRICE	DATE	PACK	ORIGIN	UNIT						
1	HI PRICE	LO PRICE	DATE	PACK	ORIGIN	UNIT						
2	0.75	0.65	4/2/2003	CTN	HILO & OA	1						
3	0.75	0.65	4/4/2003	CTN	HILO & OA	1						
4	0.9	0.65	4/9/2003	CTN	HILO & OA	1						
5	0.75	0.65	4/16/2003	CTN	HILO & OA	1						
6	0.9	0.65	4/23/2003	CTN	HILO & OA	1						
7	0.9	0.65	4/25/2003	CTN	HILO & OA	1						
8	0.9	0.71	4/30/2003	CTN	HILO & OA	1						
9	0.9	0.71	5/2/2003	CTN	HILO & OA	1						
10	0.9	0.71	5/7/2003	CTN	HILO & OA	1						
11	0.9	0.71	5/9/2003	CTN	HILO & OA	1						
12	0.9	0.71	5/14/2003	CTN	HILO & OA	1						
13	0.9	0.71	5/16/2003	CTN	HILO & OA	1						
14	0.9	0.71	5/21/2003	CTN	HILO & OA	1						
15	0.9	0.71	5/28/2003	CTN	HILO & OA	1						
16	0.9	0.71	5/30/2003	CTN	HILO & OA	1						
17	0.85	0.71	6/4/2003	CTN	HILO & OA	1						
18	0.9	0.71	6/6/2003	CTN	HILO & OA	1						
19	0.9	0.71	6/13/2003	CTN	HILO & OA	1						
20	0.9	0.71	6/18/2003	CTN	HILO & OA	1						
21	0.9	0.71	6/20/2003	CTN	HILO & OA	1						
22	0.9	0.71	6/25/2003	CTN	HILO & OA	1						
23	0.9	0.71	6/27/2003	CTN	HILO & OA	1						
24	1	0.71	7/2/2003	CTN	HILO & OA	1						

Draw AutoShapes

Ready NUM

Start F.. R.. F.. H.. P.. M. 1:48 PM

**HONOLULU WHOLESALE MARKET REPORT  
BULK OF BARGE ARRIVALS  
(from intrastate origins to Honolulu)**

Gateway | Depart. of Agriculture | Agriculture Development | Market Analysis & News | Reports

This web-page application provides a time-trend chart to help Hawaii's farmers and entrepreneurs in making better-informed business decisions. To generate an illustrative chart, please select a time range of greater than 10 days.

*Note: It may take up to 20 seconds to generate the chart depending on internet constraints.*

From  04/01/2003 Commodity

To  12/31/2004

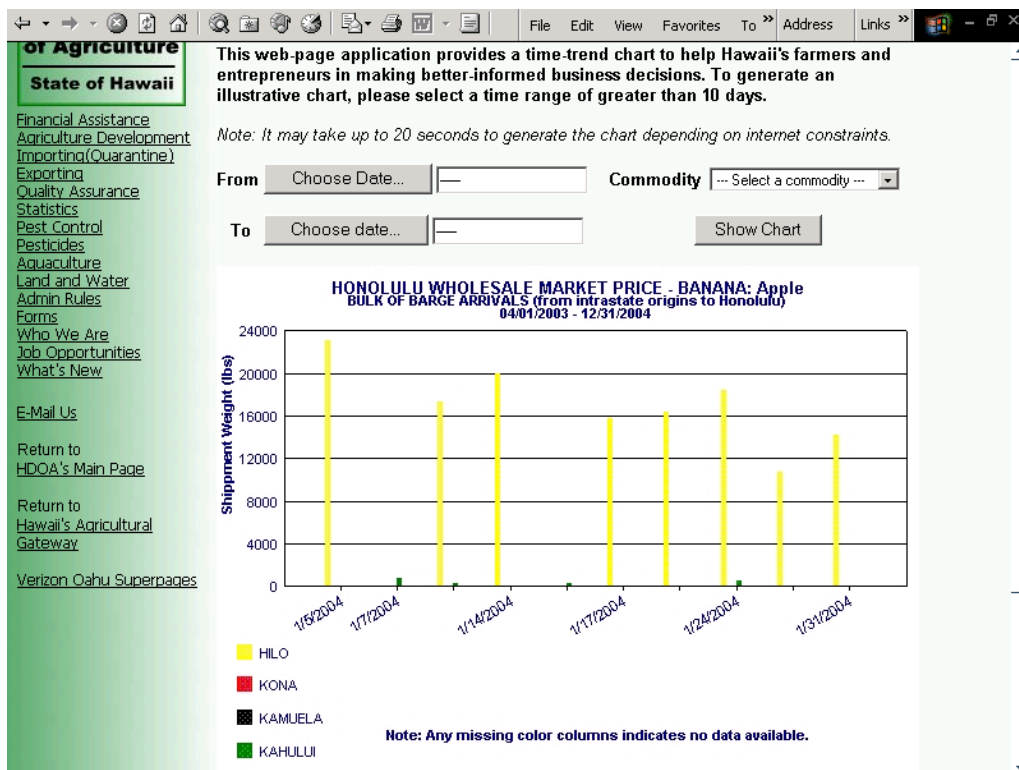
**Department of Agriculture  
State of Hawaii**

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[Agriculture Development](#)  
[Importing\(Quarantine\)](#)  
[Exporting](#)  
[Quality Assurance](#)  
[Statistics](#)  
[Pest Control](#)  
[Pesticides](#)  
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[Job Opportunities](#)  
[What's New](#)

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[Return to Hawaii's Agricultural Gateway](#)




**Hawaii Department of Agriculture - Lotus Notes**

File Edit View Create Actions Applet Help

Address [http://www2.hawaiiag.org/hdoa/add/man/reports/Bman\\_export\\_data1.asp?inlSfield=&inCNfield=CABBA](http://www2.hawaiiag.org/hdoa/add/man/reports/Bman_export_data1.asp?inlSfield=&inCNfield=CABBA)

Welcome RE: Hawaii Department of Agriculture...



**Department of Agriculture**  
State of Hawaii

## HONOLULU WHOLESALE MARKET REPORT BULK OF BARGE ARRIVALS (from intrastate origins to Honolulu)

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### Database Results CSV Download

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You have select Commodity: **CABBAGE:Chinese**  
The Start date is : **01/01/2004** and End date is: **01/31/2004**

Column Delimiter = Coma  
Text qualifier = "  
Field names included


[Export](#)

Click to download it as .CSV

If you configure your browser to associate the file type text/comma-separated-values with your spreadsheet software, then it will be started automatically when you download the file.

Office 9:19 AM

File Edit View Favorites To Address Links



**Department of Agriculture**  
State of Hawaii

## HONOLULU WHOLESALE MARKET REPORT BULK OF BARGE ARRIVALS (from intrastate origins to Honolulu)

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You have select Commodity: **BANANA:Apple**  
The Start date is : **04/01/2003** and End date is: **12/31/2004**

Column Delimiter = Coma  
Text qualifier = "  
Field names included

[Export](#)

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Microsoft Excel - 843011\_export[1]

File Edit View Insert Format Tools Data Window Help Acrobat

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A1	= ARRDATE											
	A	B	C	D	E	F	G	H	I	J	K	L
1	ARRDATE	commodity	pkg	pkgamt	tweight	HILO	KONA	KAMUELA	KAHULUI	KAUNAKA	NAWILIWILI	
2	1/5/2004	BANANA	CTN	703	23090	23090						
3	1/7/2004	BANANA	CTN	22	770				770			
4	1/12/2004	BANANA	CTN	502	17615	17315			300			
5	1/14/2004	BANANA	CTN	566	19980	19980						
6	1/15/2004	BANANA	CTN	10	300				300			
7	1/17/2004	BANANA	CTN	471	16040	15740						
8	1/21/2004	BANANA	CTN	500	16415	16415						
9	1/24/2004	BANANA	CTN	557	19035	18475			560			
10	1/28/2004	BANANA	CTN	308	10780	10780						
11	1/31/2004	BANANA	CTN	403	14275	14275						
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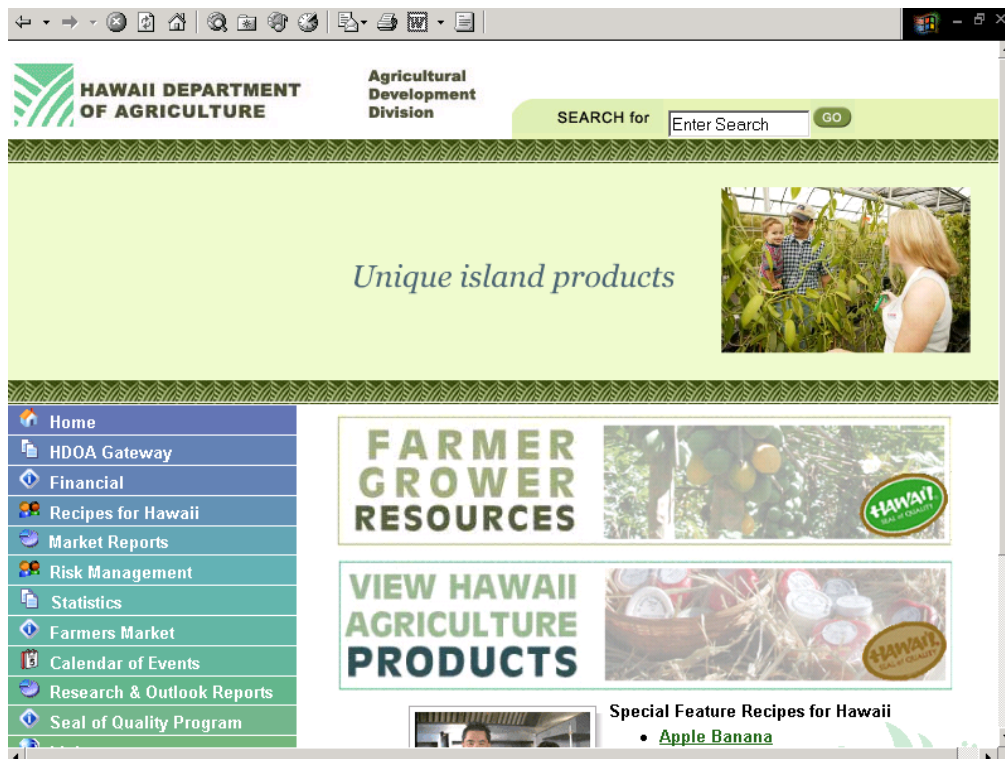
Start F.. R.. F.. P.. H.. M.. 2:00 PM

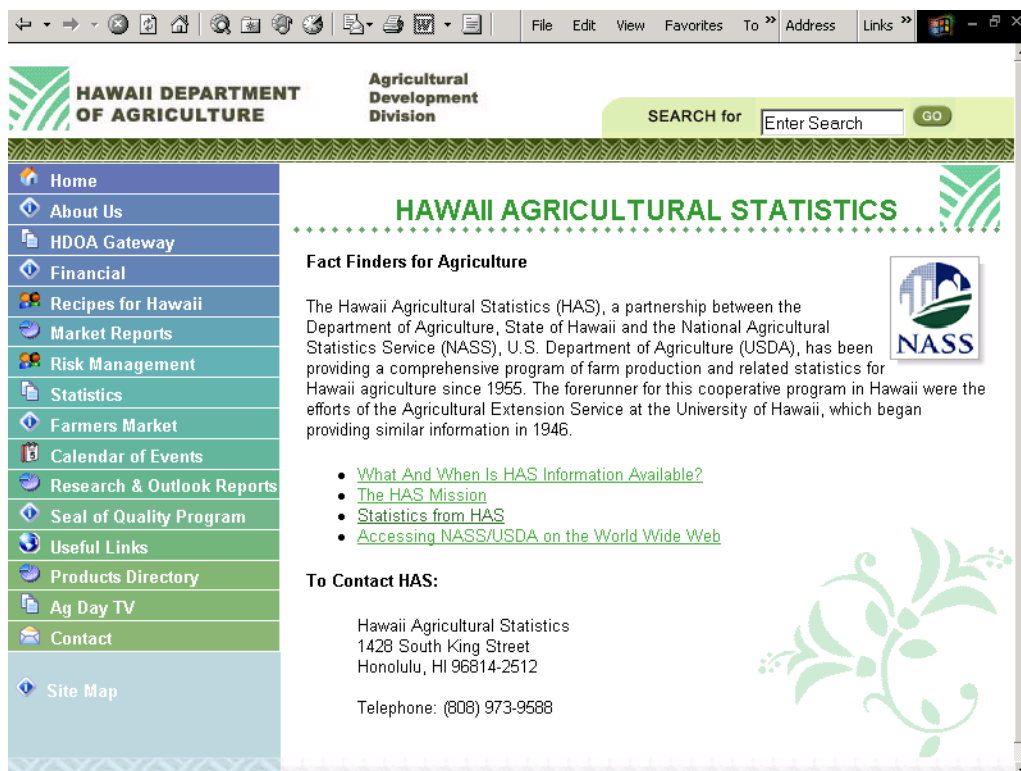
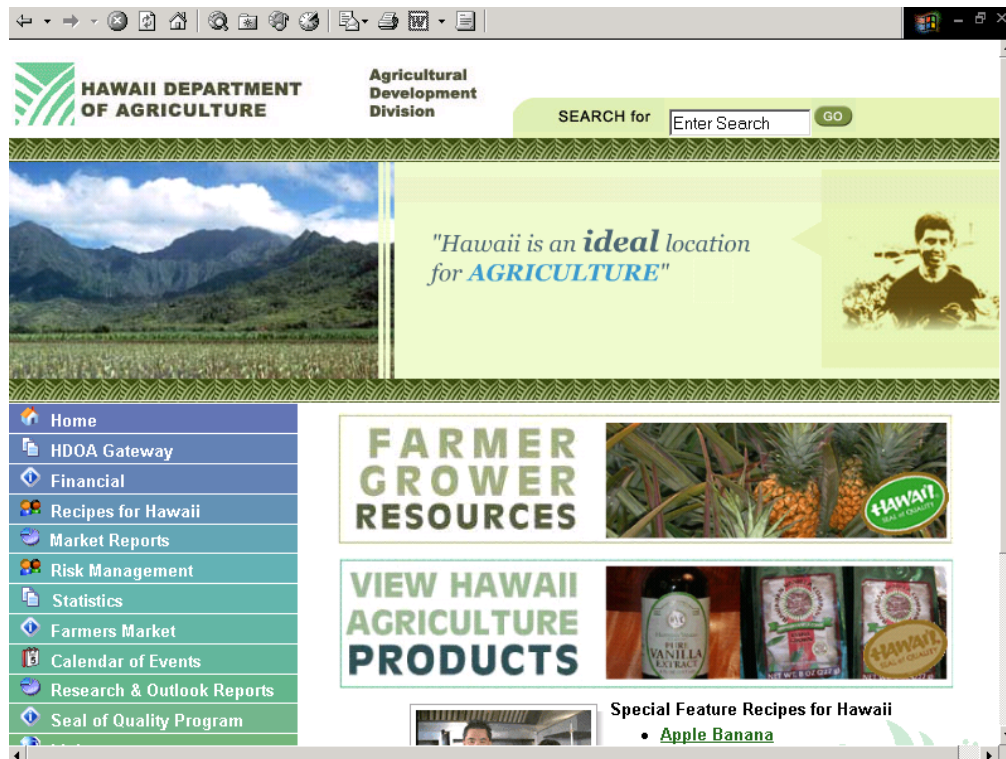
**APPENDIX III**  
**General Format for Market Intelligence Report of Select Commodities**

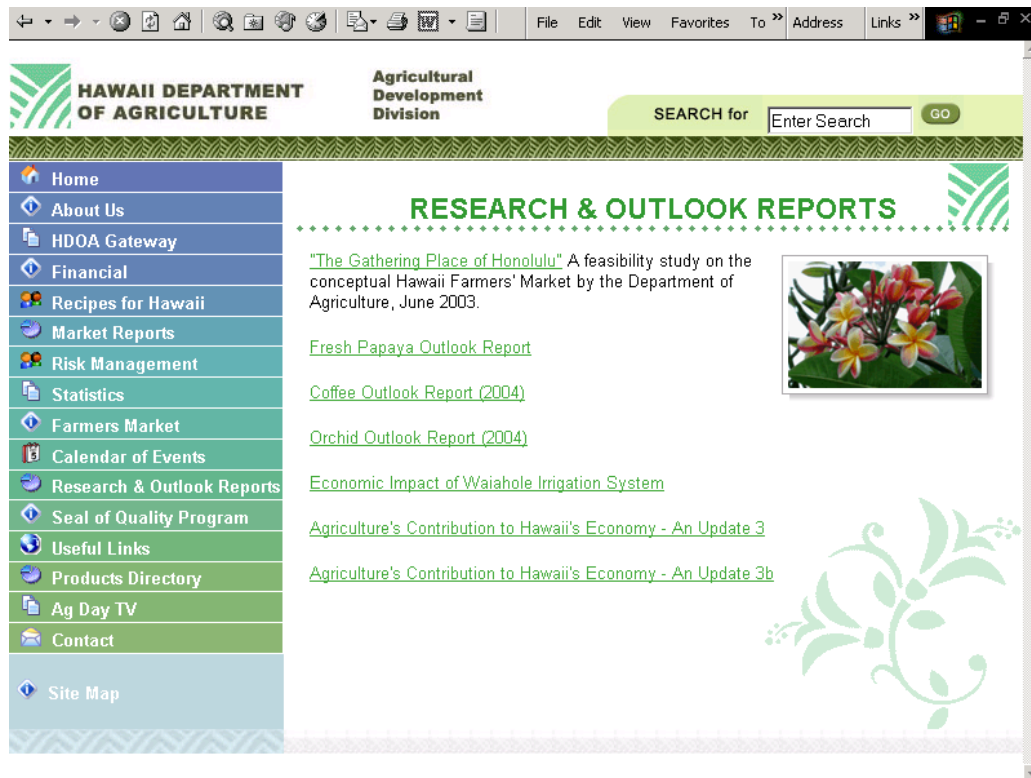
**Market Outlook Report**

- I. Introduction
  - Brief background on product
  - Objective(s) of market outlook report
- II. Local Production & Market
  - Previous, current & forecasted production, value & price trends
  - Product share of local market & assessment of export potential
  - Overview of imports into local market
- III. Potential Demand and Price Trends of Export Markets
  - Identify 2 or 3 potential markets
  - Identify demand factors for products in those markets (demographics, income, etc)
  - Previous, current & forecasted production, value & price trends
- IV. Competitive State
  - Major sources of product supply (pie chart)
  - Features/characteristics of competitive products
  - Competitive analysis of Hawaii's product (price, quality, quantity, packaging, transportation, exchange rates)
  - New emerging product(s), channels and opportunities
- V. Conclusion

## Appendix IV







**HAWAII DEPARTMENT OF AGRICULTURE** Agricultural Development Division

SEARCH for

- Home
- About Us
- HDOA Gateway
- Financial
- Recipes for Hawaii
- Market Reports
- Risk Management
- Statistics
- Farmers Market
- Calendar of Events
- Research & Outlook Reports
- Seal of Quality Program
- Useful Links
- Products Directory
- Ag Day TV
- Contact
- Site Map

## RESEARCH & OUTLOOK REPORTS

["The Gathering Place of Honolulu"](#) A feasibility study on the conceptual Hawaii Farmers' Market by the Department of Agriculture, June 2003.

[Fresh Papaya Outlook Report](#)



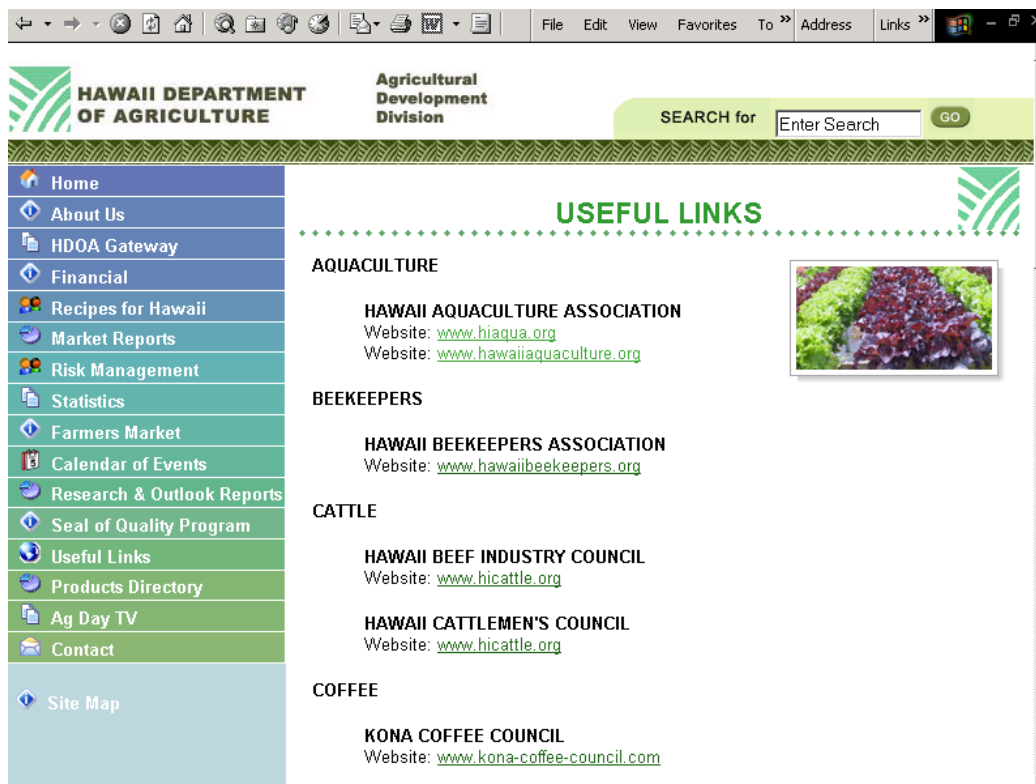
[Coffee Outlook Report \(2004\)](#)

[Orchid Outlook Report \(2004\)](#)

[Economic Impact of Waiahole Irrigation System](#)

[Agriculture's Contribution to Hawaii's Economy - An Update 3](#)

[Agriculture's Contribution to Hawaii's Economy - An Update 3b](#)

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- Seal of Quality Program
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- Products Directory
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- Site Map

## USEFUL LINKS

### AQUACULTURE

**HAWAII AQUACULTURE ASSOCIATION**  
 Website: [www.hiaqua.org](http://www.hiaqua.org)  
 Website: [www.hawaiiaquaculture.org](http://www.hawaiiaquaculture.org)

### BEEKEEPERS

**HAWAII BEEKEEPERS ASSOCIATION**  
 Website: [www.hawaiibeekeepers.org](http://www.hawaiibeekeepers.org)


### CATTLE

**HAWAII BEEF INDUSTRY COUNCIL**  
 Website: [www.hicattle.org](http://www.hicattle.org)

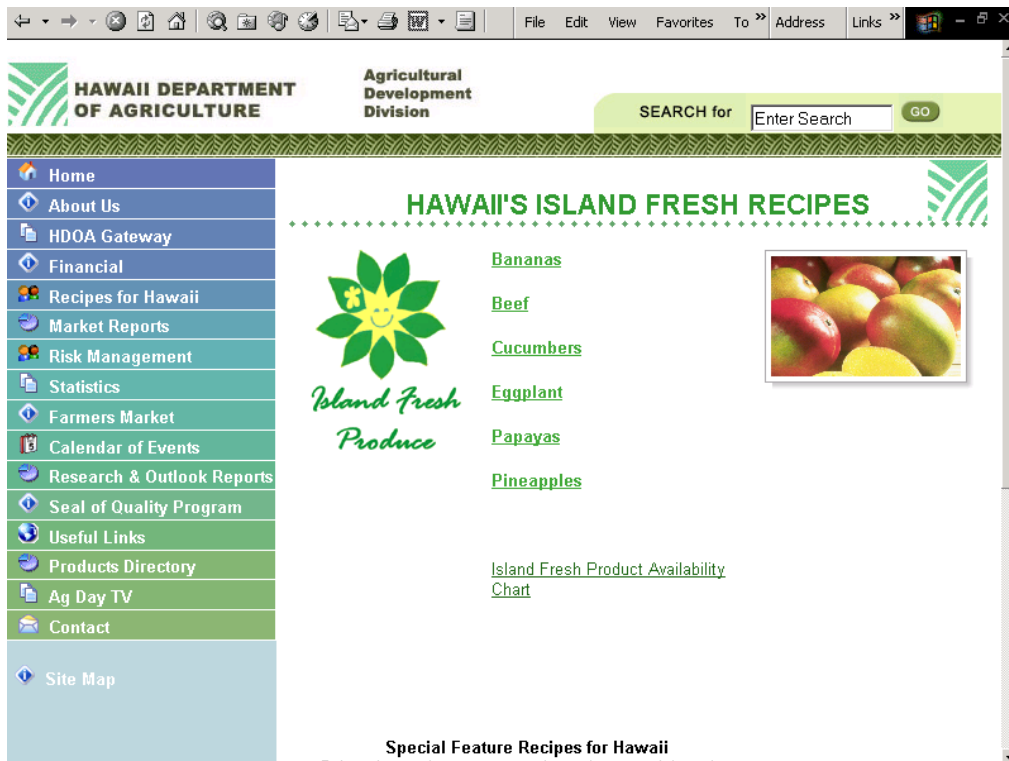
**HAWAII CATTLEMEN'S COUNCIL**  
 Website: [www.hicattle.org](http://www.hicattle.org)

### COFFEE

**KONA COFFEE COUNCIL**  
 Website: [www.kona-coffee-council.com](http://www.kona-coffee-council.com)



## Appendix V Other Webpages



**HAWAII DEPARTMENT OF AGRICULTURE**  
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SEARCH for  Enter Search

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### HAWAII'S ISLAND FRESH RECIPES



[Bananas](#)

[Beef](#)

[Cucumbers](#)

[Eggplant](#)

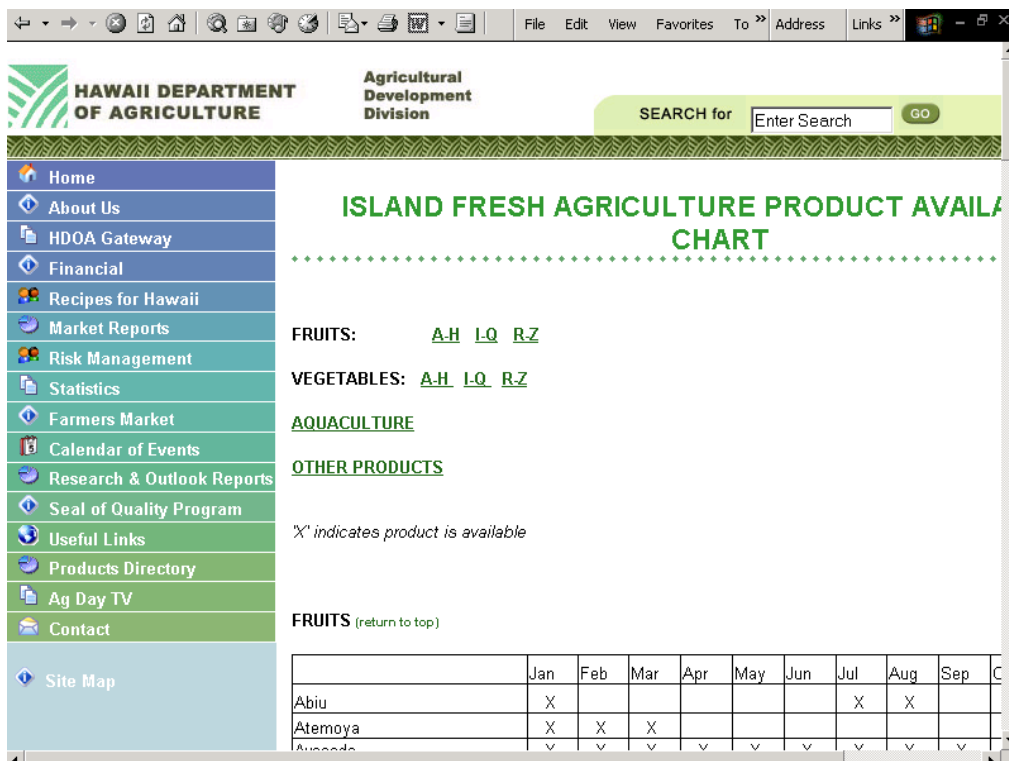
[Papayas](#)

[Pineapples](#)



[Island Fresh Product Availability Chart](#)

**Special Feature Recipes for Hawaii**  
Select the specific time period to the recipes you wish to view.



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### ISLAND FRESH AGRICULTURE PRODUCT AVAILABILITY CHART

**FRUITS:** [A-H](#) [I-Q](#) [R-Z](#)

**VEGETABLES:** [A-H](#) [I-Q](#) [R-Z](#)

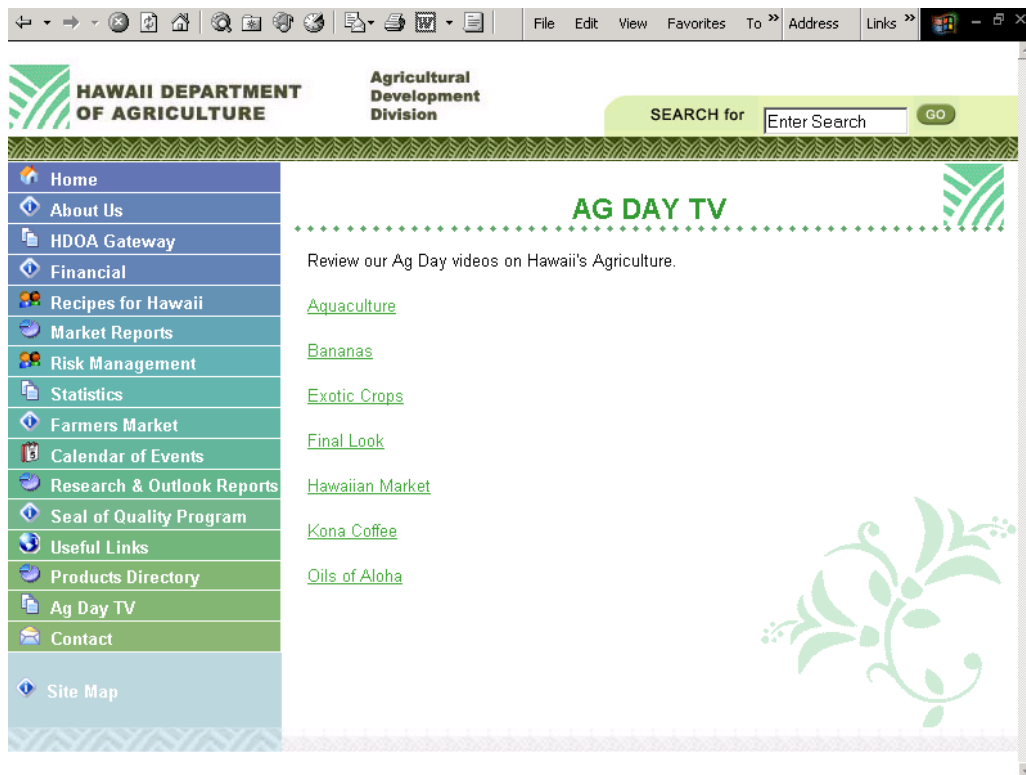
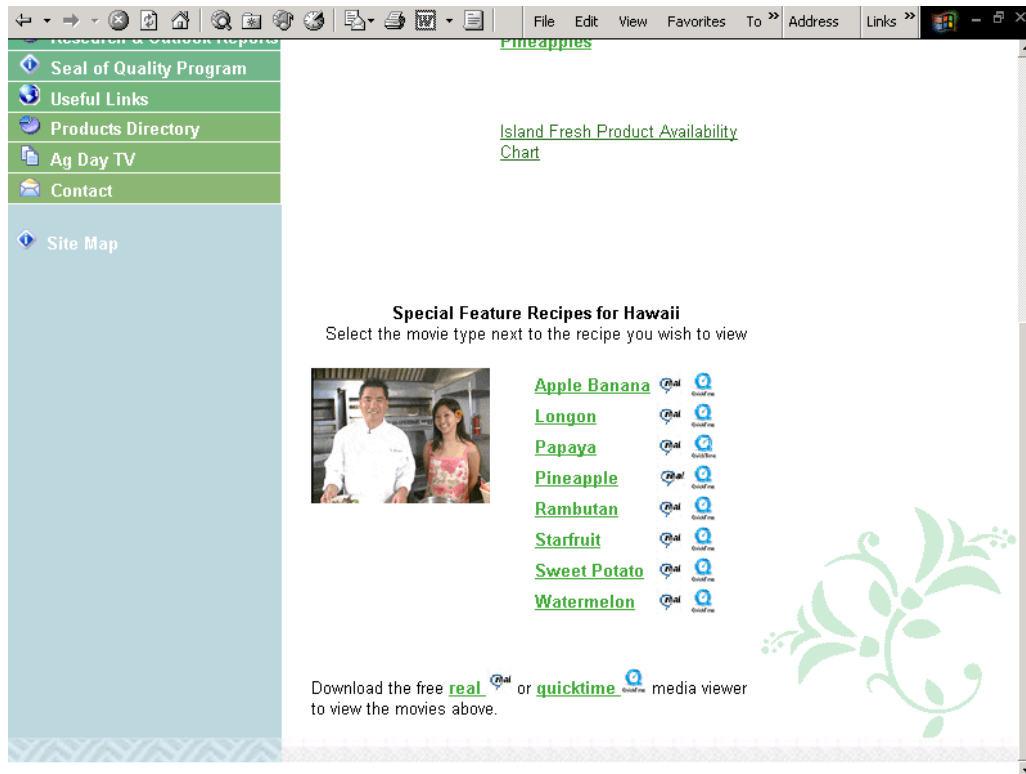
[AQUACULTURE](#)

[OTHER PRODUCTS](#)

*"X" indicates product is available*

**FRUITS** (return to top)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Abiu	X						X	X		
Atemoya	X	X	X							
Avocado	X	X	X	X	X	X	X	X	X	X



## Appendix VI

### Primary Web Page Tools

DB Dev.FP3 - Search - Lotus Notes

File Edit View Create Actions Applet Help

Address: <http://www.hawaiiag.org:591/expdir/search.htm>

Welcome RE: Matthew K Loke - Inbox <http://www2.hawaiiag.org/hdoa...> bananas DB Dev.FP3 - Search

**Department of Agriculture**  
STATE OF HAWAII

**Hawaii Agricultural Products**

**\*\* Search \*\***

**Search the Database of Hawaii Agricultural Products to find a specific producer or product that interests you, or just browse the listings to view the large variety of products Hawaii has to offer.**

- You may search the database of Hawaii Agricultural Products by any criteria you see here or in any combination.
- If you select several criteria, your search results must match all the criteria you have listed.
- If the *Exporter* box is checked, the search results will contain only those producers who have indicated that they sell outside the State of Hawaii. If the *Exporter* box is left unchecked, your results will contain all producers in our database that meet any other search criteria you have chosen.

Exporter: ☐

Company:

and

Island:

and

Business Type:

and

Services:

and

Office

Start FSMIP Update... DB Dev.FP3 - ... 11:57 AM

## Appendix VII Financial Report

### Listing of Federal Itemized Expenditures (10/01/2000-12/31/2004)

<b>Date</b>	<b>PO Ref. ##</b>	<b>Activity</b>	<b>Expenditure</b>
Jan. 2003	91770	Technical Consultant - M. Burling	\$15,950.00
Apr. 2003	92746	Charting Software - Dundas	\$943.00
Apr. 2003	92747	Research Consultant - A. Pesante	\$3,000.00
Apr. 2003	93027	Research Consultant - Tradeworks	\$2,210.00
Apr. 2003	93224	Trade Statistics Software (Global Trade)	\$1,500.00
Jan. 2004	97705	Trade Statistics Software (Global Trade)	\$1,500.00
Mar. 2004	98926	Charting Software - Dundas	\$349.00
Mar. 2004	99066	Trade Statistics Software (Global Trade)	\$1,500.00
Dec. 2004	102417	Technical Consultant - Inets	\$14,947.82
<b>Total</b>			<b><u>\$41,899.82</u></b>

### Listing of State Itemized Expenditures (10/01/2000-12/31/2004)

<b>Date</b>	<b>PO Ref. ##</b>	<b>Activity</b>	<b>Expenditure</b>
Sept. 2001	84075	Trade Statistics Software (Global Trade)	\$1,500.00
Apr. 2002	86794	Trade Statistics Software (Global Trade)	\$1,500.00
Apr. 2002	86795	NASDA Contract	\$25,000.00
Sept. 2002	90127	Trade Statistics Software (Global Trade)	\$1,500.00
Dec. 2002	91488	Univ. of Hawaii - Office of Research	\$15,000.00
Aug. 2001-Jan. 2002	171-A	Temporary Payroll, L Shu	\$12,239.96
May 2002-Jun. 2002	171-A	Temporary Payroll, S. Mollo	\$4,465.25
Jul. 2002	171-A	Temporary Payroll, R. Twito	\$1,367.04
Oct. 2001-Dec.2004	171-A	Administrative & Program Management	\$15,000.00
<b>Total</b>			<b><u>\$77,572.25</u></b>

**Grand Total** **\$119,472.07**